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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,470	10/04/2000	Richard W. DeLange	Grant Prideco-109	5425

7590 02/25/2004

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EXAMINER

LUGO, CARLOS

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/679,470	Applicant(s) DELANGE ET AL.	
	Examiner Carlos Lugo	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-17 and 28 is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 18-27 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to applicant's amendment filed on February 9, 2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-10,12 and 18-27 are rejected** under 35 U.S.C. 103(a) as being unpatentable over US Pat No 4,696,498 to Church in view of US Pat No 1,590,357 to Feisthamel.

Regarding claims 1,6,8-10,12,18 and 20-22, Church discloses a connection comprising a pin (54) having pin threads, formed externally and extending along a frustoconical surface from a starting point and terminating adjacent the pin end. That external surface has an outside diameter no greater than the outside diameter of a major length of the pin member. The pin includes a pin nose at the free end having an inclined nose section.

A box member (54) includes a threaded surface to be engaged with the pin-threaded surface. This box-threaded surface extends along a frustoconical surface from a starting point and terminating adjacent the box end or in the opposite direction of the pin threaded surface. The box includes an annular inclined shoulder formed internally the box.

An external seal is located between the pin and the box element. It is located adjacent the starting point of the pin threaded surface and the box end.

An internal seal is located adjacent the starting point of the box threaded surface and the pin end. The pin and box threads are confined between the external and internal seals.

However, Church fails to disclose that the external seal comprises an annular elastomeric seal disposed between the pin and the box. Church discloses that the elastomeric seal, the external seal, is located at the middle and at the end of the threaded connection.

Feisthamel teaches that is known in the art to have an external seal that includes an annular elastomeric seal (13) disposed between the pin and the box.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an external seal that includes an annular elastomeric seal, as taught by Feisthamel, into a device as described by Church, in order to create a seal environment or a fluid tight joint.

As to claim 2, Church discloses that the pin threads run out to an outside diameter of the first tubular body at the starting point of the pin threads.

As to claim 3, Church illustrates that the stab flanks of the pin threads have a greater inclination relative to a central axis of the connector than load flanks of the pin threads.

As to claim 4, Church discloses that the pin seal surface is formed on a radially enlarged section of the first tubular body.

As to claim 5, Church discloses that the pin threads and the box threads are fully confined between the external and internal seals when the pin and the box members are engaged.

As to claim 7, Church discloses that the pin threads and the box threads are fully confined between the external and internal seals when the pin and the box members are engaged.

As to claim 19, Church discloses that the internal seal is formed by the engagement of the pin nose with the box shoulder.

As to claims 23-27, Church discloses that the second tubular body comprises a coupling that has first and second axial coupling ends with the box member formed in the first and second ends.

Allowable Subject Matter

4. **Claims 13-17 and 28 are allowed.**
5. **Claim 11 is objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

6. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
This Office Action is final.

Response to Arguments

7. Applicant's arguments filed February 9, 2004 have been fully considered but they are not persuasive.

Regarding applicant's arguments that neither Church nor Feisthamel disclose a groove in the box for an external seal (Page 9 Line 16), both, Church and or Feisthamel disclose a groove in the box. Church discloses a groove (32 and 72) located on the box (16 and 52 respectively) that is considered as an external seal with respect to the internal seals (48 and 88 respectively).

Feisthamel teaches that is known in the art to have an external seal, with respect to an internal seal, located adjacent the pin threaded starting point and proximate the box end (Figures 2-5).

As to applicant's arguments that neither Church nor Feisthamel disclose an elastomeric seal (Page 10 Line 1), both, Church and or Feisthamel disclose an elastomeric seal.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed,

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and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lugo whose telephone number is 703-305-9747. The examiner can normally be reached on 9-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.

Carlos Lugo
Examiner
Art Unit 3677

February 18, 2004.


J. J. SWANN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600